

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 10-332593

(43)Date of publication of application : 18.12.1998

(51)Int.Cl.

G01N 21/78
G01N 21/75
G01N 33/543
G01N 33/543

(21)Application number : 09-136435

(71)Applicant : HITACHI LTD

(22)Date of filing : 27.05.1997

(72)Inventor : MIYAHARA YUJI

KAJIYAMA TOMOHARU

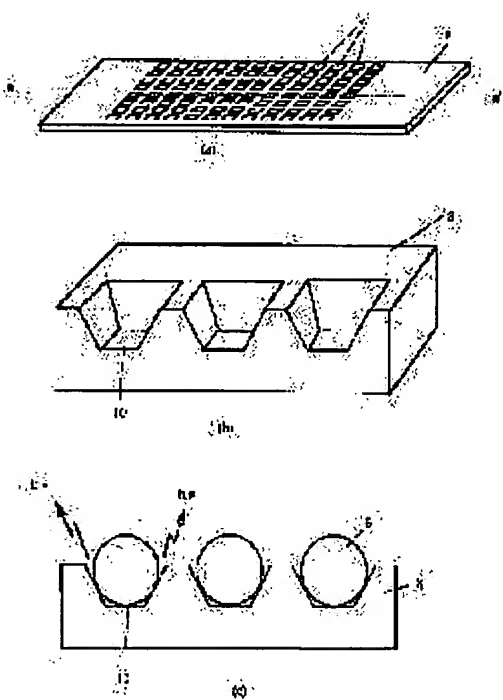
TOMITA HIROYUKI

(54) ELECTROCHEMILUMINESCENCE DETECTING CELL

(57)Abstract:

PROBLEM TO BE SOLVED: To obtain an electrochemiluminescence detecting cell whose reproducibility is high and which obtains a high S/N ratio by a method wherein a recessed part is formed on a working electrode and magnetic beads are captured by the recessed part in a one-to-one manner so as to emit light.

SOLUTION: A plurality of recessed parts 9 are formed on a conductive electrode plate 8. The size of every recessed part 9 is matched to the size of every magnetic bead 6. The bottom face 10 and side faces by every recessed part 9 act as electrodes. It is required to completely remove every bead 6 which is captured once when a next measurement is performed. When the area of the bottom face 10 is made smaller than that of an opening part in such a way that a cross-sectional shape is an inverted trapezoid, every bead is removed efficiently. It is required to deliver electrons with reference to every working electrode so that a luminescent reagent can emit light. As a result, only the luminescent reagent which is close of every working electrode out of luminescent reagents which are fixed to every bead 6 participates in luminescence. In every working electrode, at least four places on side faces of every recessed part 9 are obtained as points coming into contact with every bead 6, every bead 6 can come into contact with the bottom face 10 when the structure of every recessed part is made optimum, and every bead 6 owns five contact points in common. Since electrochemiluminescence is generated in every contact



point, it can be measured in a high S/N ratio.

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[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the
examiner's decision of rejection or application
converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of
rejection]

[Date of requesting appeal against examiner's
decision of rejection]

[Date of extinction of right]

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